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## Datasheet for ABIN3137065 ELP3/KAT9 Protein (AA 1-547) (Strep Tag)

### Overview

Quantity:	1 mg
Target:	ELP3/KAT9 (ELP3)
Protein Characteristics:	AA 1-547
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ELP3/KAT9 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), ELISA, SDS-PAGE (SDS)

### Product Details

Sequence: MRQKRKGDLS PAELMMLTIG DVIKQLVEAH EQGKDVDLNK MKTKTAAKYG LASQPRLVDI  
IAAVPPHYRK ILIPKLKAKP VRTASGIAVV AVMCKPHRCP HISFTGNICI YCPGGPDSDF  
EYSTQSYTGY EPTSMRAIRA RYDPFLQTRH RIEQLKQLGH SVDKVEFIVM GGTFMALPEE  
YRDYFIRSLH DALSGHTSNN IHEAIKYSER SFTKCVGITI ETRPDYCMKR H LSDMLTYGC  
TRLEIGVQSV YEDVARDTNR GHTVKAACES FHLAKDSGFK VVTHMMPDLP NVGLERDIEQ  
FIEFFENPAF RPDGLKLYPT LVIRGTGLYE LWKSGRYSY SPSDLIELVA RILALVPPWT  
RVYRVQRDIP MPLVSSGVEH GNLRELAFAR MKDLGIQCRD VRTREVG IQE IHHRV RPYQV  
ELVRRDYVAN GGWETFLSYE DPDQDILIGL LRLRKCSEET FRFELGGGVS IVRELH VYGS  
VVPVSSRDPT K FQH QGFGML L MEEAERIAR EEH GSGKMAV ISGVGTRNYY RKIGYRLQGP  
YMKMLK

**Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you**

**have a special request, please contact us.**

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### Characteristics:

#### Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

#### Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

#### Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.
- We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

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### Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.

## Product Details

2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity:	≥ 80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

## Target Details

Target:	ELP3/KAT9 (ELP3)
Alternative Name:	Elp3 ( <a href="#">ELP3 Products</a> )
Background:	<p>Elongator complex protein 3 (EC 2.3.1.-) (tRNA uridine(34) acetyltransferase),FUNCTION: Catalytic tRNA acetyltransferase subunit of the elongator complex which is required for multiple tRNA modifications, including mcm5U (5-methoxycarbonylmethyl uridine), mcm5s2U (5-methoxycarbonylmethyl-2-thiouridine), and ncm5U (5-carbamoylmethyl uridine) (By similarity). In the elongator complex, acts as a tRNA uridine(34) acetyltransferase by mediating formation of carboxymethyluridine in the wobble base at position 34 in tRNAs (By similarity). May also act as a protein lysine acetyltransferase by mediating acetylation of target proteins, such activity is however unclear in vivo and recent evidences suggest that ELP3 primarily acts as a tRNA acetyltransferase (By similarity). Involved in neurogenesis: regulates the migration and branching of projection neurons in the developing cerebral cortex, through a process depending on alpha-tubulin acetylation (PubMed:19185337). Required for acetylation of GJA1 in the developing cerebral cortex (PubMed:28507509). {ECO:0000250 UniProtKB:D5VRB9, ECO:0000250 UniProtKB:Q9H9T3, ECO:0000269 PubMed:19185337, ECO:0000269 PubMed:22854966, ECO:0000269 PubMed:28507509}.</p>
Molecular Weight:	62.4 kDa
UniProt:	<a href="#">Q9CZX0</a>

## Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from

Application Details

Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.

During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Restrictions: For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)